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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/773,759	02/08/01	NAKAGIMA	040356/0354

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EXAMINER	
GONZALEZ, J	
ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 10/24/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/778,759

Applicant(s)

NAKAJIMA, YUKI

Examiner

Julio C. Gonzalez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 0801.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 February 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

- ✓ 1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the coils disposed in the inner and outer side of the stator as disclosed in claims 5 and 6 and the three sensors disclosed in claim 12 and the non-negative maxima and non-positive minima as disclosed in claim 14 must be shown specifically or the feature(s) canceled from the claim(s). No new matter should be entered.

Claim Rejections - 35 USC § 112

- ✓ 2. The following is a quotation of the second paragraph of 35 U.S.C. 112:
- The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- ✓ 3. Claims 14 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
- In claim 14, what meant by "one variation cycle the signal"? Where is that in the drawings and support from the specifications? Any signal has a maxima and a minima, what makes this one unique? What the signal has to do with the magnets and the plates?
- In claim 15, what is considered a "sharp" variation? A change between a maxima and a minima is also considered a sharp variation. What makes the maxima positive and the minimum negative?

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 1-8, 12, 14 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Nagate et al (Patent # 5,864,192).

Nagate et al discloses magnet pole position detector comprising plates 8a of the same number as the magnets 11, three magnetic sensors 16 (see figure 15). The plates been fixed to the rotor and the stator having coils (see figure 14) and a signal based on the flux of the magnetic sensor having a maxima and minima (see figure 33).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagate et al in view of Kazama et al.

Nagate et al discloses magnet pole position detector comprising plates 8a of the same number as the magnets 11, three magnetic sensors 16 (see figure 15). The

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plates been fixed to the rotor and the stator having coils (see figure 14) and a signal based on the flux of the magnetic sensor having a maxima and minima (see figure 33). However, Nagate et al does not disclose that the plates are fixed to the rotor core via a non-magnetic plate.

On the other hand, Kazama et al discloses for the purpose of detecting complicated signals due to changes in the magnetic field of the rotor and the stator teeth that the plate 7b is fixed to the rotor via a non-magnetic plate 6.

It would have been obvious to one having ordinary skill in the art to design a rotor with a shaft, magnet and a sensor as disclosed by Nagate et al and to include a non magnetic material between the core and the end plates for the purpose of detecting complicated signals due to changes in the magnetic field of the rotor and the stator teeth as disclosed by Kazama et al.

8. Claim 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagate et al in view of Masuzawa et al.

Nagate et al discloses magnet pole position detector comprising plates 8a of the same number as the magnets 11, three magnetic sensors 16 (see figure 15). The plates been fixed to the rotor and the stator having coils (see figure 14) and a signal based on the flux of the magnetic sensor having a maxima and minima (see figure 33). However, Nagate et al does not disclose that the magnets comprise a pair of magnet components that have equal polarity.

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On the other hand, Masuzawa et al discloses for the purpose of changing the magnetic fluxes per magnetic pole freely without changing the position that the magnets comprise a pair of magnet components that have equal polarity (see figure 8A).

It would have been obvious to one having ordinary skill in the art to design rotor with a shaft, magnet and a sensor as disclosed by Nagate et al and to include in each magnet a pair of magnets for the purpose of changing the magnetic fluxes per magnetic pole freely without changing their position as disclosed by Masuzawa et al.

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagate et al in view of ordinary skill in the art.

Nagate et al discloses magnet pole position detector comprising plates 8a of the same number as the magnets 11, three magnetic sensors 16 (see figure 15). The plates been fixed to the rotor and the stator having coils (see figure 14) and a signal based on the flux of the magnetic sensor having a maxima and minima (see figure 33). Nagate et al discloses the claimed invention except for sensors been apart 30 degrees. It would have been obvious to one having ordinary skill in the art at the time the invention was made to come out with that value, since it has been held that discovering the optimum value of result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

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Response to Arguments

10. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

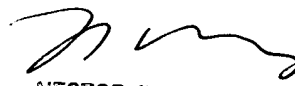
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is (703) 305-1563. The examiner can normally be reached on M-F (8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Jcg

October 20, 2001


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